INL biochemical engineer David Thompson was recently named Outstanding Engineer of 2010 by Idaho State University's College of Engineering during the Eastern Idaho Engineering Council's celebration of National Engineers Week.

ISU recognizes INL researcher as 2010's outstanding engineer

By Reuel Smith, *INL Communications & Governmental Affairs*

Idaho State University's College of Engineering has recognized Idaho National Laboratory biochemical engineer David Thompson as the Outstanding Engineer for 2010. Thompson received the award recently at the Eastern Idaho Engineering Council annual banquet celebrating National Engineers Week.

The Council and ISU annually recognize an Idaho engineer who has demonstrated exemplary service to the field of engineering in southeastern Idaho, is an inspiration and a role model to others, serves the community and makes a clear contribution to the betterment of society.

Thompson, with the plaque awarded for his exemplary service to the field of engineering and to surrounding communities.

In 2009, Thompson received the INL Laboratory Director's award for exceptional engineering achievement. He is a co-inventor on 34 patents and pending U.S. and international applications. He also is an author or co-author on more than 140 journal articles, reports and technical presentations.

Thompson was selected as one of the nation's 100 best and brightest engineers in 2007 and was invited to attend the "Frontiers of Engineering Symposium" hosted by the National Academy of Engineering.

In 2006, he and a team of INL researchers won an R&D 100 Award for the discovery of the Xtreme Xylanase enzyme — an enzyme produced by an extremophilic organism that may enable U.S. industry to produce fuels and chemicals from residual biomass. Thompson's team has since attracted more than $30 million of research and development funding from private investors to make biomass conversion more efficient.

Thompson has been employed at INL for more than 13 years and leads research teams focused on biological production of value-added products from renewable resources. Since joining INL, Thompson has worked to develop and improve sustainable methods for handling and processing renewable feedstocks; industrial, municipal and forest products process effluents and wastewaters; and renewable agricultural residues such as cereal straws and corn stover.

In environmental applications, he has applied biodegradation of materials such as wheat straw to the distributed bioremediation of acid mine drainage and to the biofiltration of volatile organic contaminants.

In the field of heterogeneous chemical catalysis, he is co-inventor of a patented technology for the sustainable regeneration of solid catalysts, which offers significant promise in the potential elimination of highly dangerous hydrofluoric and sulfuric acids used in the manufacture of motor fuel octane enhancers.

In 2007, Thompson was selected as one of the nation's 100 best and brightest by the National Academy of Engineering.

And for the past 13 years, Thompson has served as a volunteer patrol reservist for regional law enforcement agencies so communities can more readily fulfill their commitments during times of budget and funding challenges.

Thompson also has participated in volunteer organizational and management activities for international conferences and symposia for junior-level professionals. For example, he has served on the National Program Committee of American Institute of Chemical Engineers (AIChE) since 2002 and the Organizing Committee of the Symposium on Biotechnology for Fuels and Chemicals since 2002. He currently serves as vice chair for AIChE's Sustainable Engineering Forum.

He holds bachelor's and master's of science degrees in chemical engineering from Purdue and Michigan State universities, respectively, and holds a doctorate in chemical engineering from Michigan State University.

Since 1999, the ISU College of Engineering has recognized six INL employees, including Thompson, with the Outstanding Engineer of the Year award during National Engineers Week. They are:

2010: David Thompson
2007: Gaven Knighton
2006: Michael Nitzel
2002: Richard Jacobsen
2000: Thomas Larson
1999: Philip Wheatley

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